

## INDOOR ENVIRONMENTAL QUALITY INVESTIGATION

Rochester Community Unit School District 3A  
4 Rocket Drive  
Rochester, Sangamon County, Illinois 62563  
IDPH File No. 912230201



**Illinois Department of Public Health**  
Division of Environmental Health  
Toxicology Program  
January 2003

## PURPOSE

At the request of the school district and in response to complaints made by several teachers in the third grade wing, the Illinois Department of Public Health (IDPH) has performed an inspection of the Rochester Elementary School for factors which might indicate poor indoor environmental quality.

## BACKGROUND AND STATEMENT OF ISSUES

On December 23, 2002, staff from the IDPH Toxicology Section met at the Rochester Elementary School with a maintenance staff person to discuss the basic operations of the school's heating, ventilation, and air-conditioning (HVAC) system and perform a visual inspection of the third grade wing classrooms for general indoor environmental parameters. According to the maintenance staff person, each wing of the school is served with a separate air handling system for ventilation and cooling. Individual classrooms are served by heating radiators on the outside walls that provide the majority of heat from hot water circulation. Classrooms are ventilated by means of ceiling mounted air diffusers, providing approximately 25 percent outdoor air mixed with recirculated air.

During the visual inspection of the HVAC system, IDPH staff looked at 1) the condition and location of the outdoor air intakes to verify they were open, unobstructed, and away from pollutant sources such as buses or other vehicles, 2) the condition of supply air diffusers and return air vents, 3) the condition of the heating coils in the classroom radiators, and 4) the air handling system and documentation of filters changed according to manufacturer recommendations. The exterior of the school was also inspected as was the general indoor environment in the third grade wing.

Staff completed the visual inspection of the HVAC system, school exterior, and general classroom environment using a School Indoor Environmental Quality Assessment Checklist. The checklist was adapted, with permission, from the U.S. Environmental Protection Agency's *Indoor Air Quality for Schools* Program. During the inspection, staff took note of the general environment in each classroom while paying close attention to items that might contribute to complaints such as water stains on carpet or ceiling tiles, classroom activities, and the presence of plants, animals, and chemicals. No indoor environmental factors were identified that would pose an immediate threat to the safety and health of your students, teachers, and other staff.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the inspection, we have made several conclusions and recommendations, including the following:

- The heating units in many classrooms had some dust and debris on the tops of the coils. Dust inside and on the coils can be a reservoir for a variety of allergens and asthma triggers, including dust mites and mold spores. These heating units should be routinely inspected and cleaned.
- Houseplants were present in two classrooms (303 and 302). They appeared to be healthy and well maintained. If not well maintained, houseplants can be a source of fungal

growth and contribute to the overall level of fungi inside the classrooms and affect sensitive occupants, especially if mold is a concern.

- A fish tank was present in one classroom (303). There was no evidence of leaking or moisture on the carpet below the tank. A small amount of mold was present on the underside of the tank lid. This small amount of mold can also contribute to the overall level of fungi inside the classroom. The tank lid should be removed and cleaned regularly.
- Water stains were present on a few ceiling tiles, near the return air duct in room 305 and above the drinking fountain in the hall near the entrance to the girl's restroom. We did not observe any signs of mold growth on the tile in room 305 or in the area in the ceiling plenum. Stained ceiling tiles are not a threat to health, but are an indication of current or previous moisture intrusion and should be replaced. The maintenance staff person stated that the stains were probably from roof leaks that had been repaired.
- Down spouts and splash guards were missing or out of place at several locations on the school exterior. Some soil erosion had occurred in areas where the splash guards were missing. The purpose of gutters and down spouts is to carry water away from the building's foundation. These missing down spouts and splash guards should be replaced as soon as outdoor temperatures are conducive to performing outside repairs.

### **Preparer of Report**

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